# 2021 Spring Fire Weather Webinar

National Weather Service, Albany, NY
Dan Thompson, Meteorologist/Fire Weather Program Leader
Steve DiRienzo, Warning Coordination Meteorologist







### **Outline**

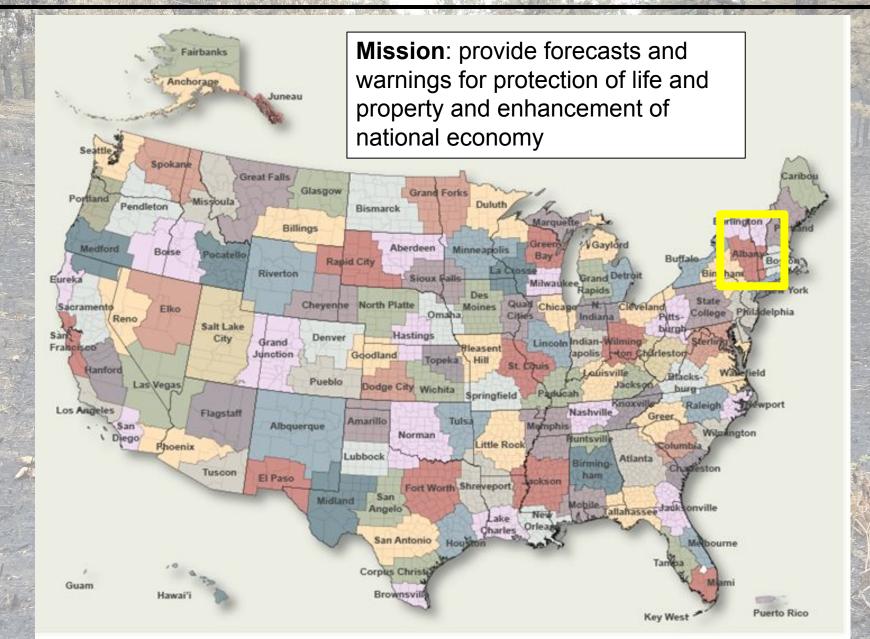


- 1. Introductions
- 2. Fire Weather Coordination
- 3. NWS Albany Fire Weather Products
- 4. NWS Albany Fire Weather Webpage
- 5. Spot Forecast Webpage
- 6. 2020 Fire Weather Season Review
- 7. 2021 Spring Outlook
- 8. Miscellaneous Items
- 9. Open Forum



### **National Weather Service**







# **NWS Albany**





 Department of Commerce

- NOAA
  - NWS



# **NWS Albany**



- Located on SUNY-Poly Campus
- About 25 people on staff
- 24/7/365 operations

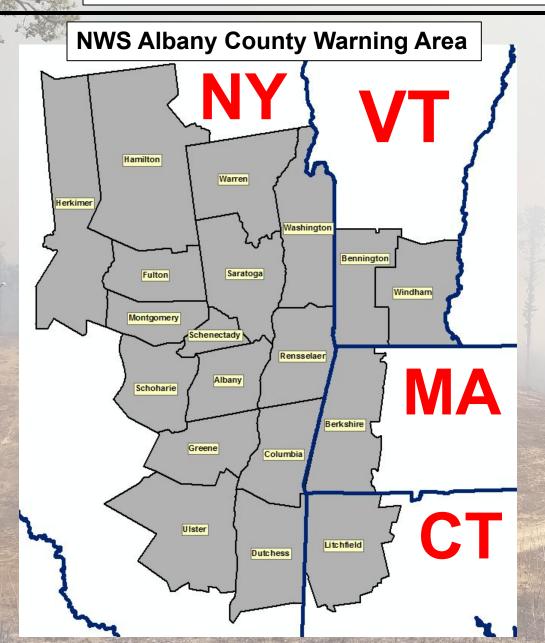






### Fire Weather Coordination





- NWS Albany is the New York State Liaison office – we coordinate non-routine fire weather products for eastern New York with Captain Jaime Laczko (NYSDEC)
- NWS Burlington coordinates with Vermont
- NWS Norton, MA and Upton, NY coordinate with Massachusetts and Connecticut



# NWS Albany Fire Weather Products

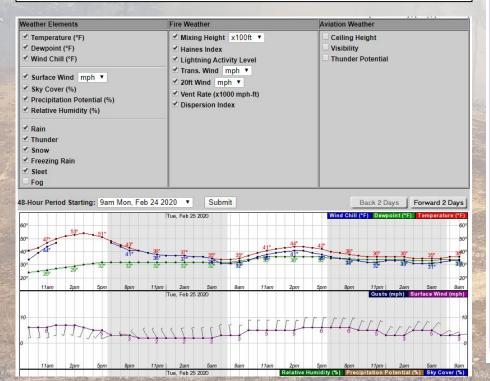


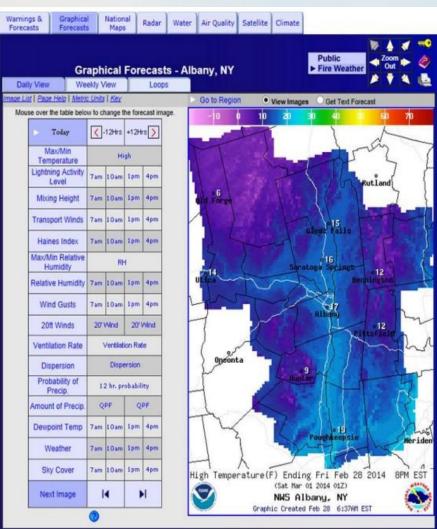




#### **Routine Products**

- Gridded Fire Weather Forecast
  - Graphical forecast of fire weather elements
  - Updated daily around 4 am/pm (or more frequently if necessary)







NYZ032-270915

### **Fire Weather Products**



#### **Routine Products**

- FWF Fire Weather Planning Forecast
  - ☐ Brief fire weather discussion, followed by tabular forecast for the next ~48 hours and extended forecast
  - ☐ Zone-averaged forecast
  - ☐ Issued daily around 4 am/pm Mar–Nov, updated more frequently if necessary

Including the cities Old Forge, Atwell, N			McKeever,		
537 PM EDT Thu Apr 2	26 2018				
	Tonight	Fri	Fri Night	Sat	
CLOUD COVER	PCldy	MCldy	MCldy	MCldy	
PRECIP TYPE	RECIP TYPE Showers		Showers	Showers	
CHANCE PRECIP (%)	40	40	40	60	
TEMP (24H TREND)	33 (-7)	54 (+8)	38	53	
RH % (24H TREND)	94 (-4)	52 (-19)	100	61	
20FTWND-AM(MPH)		S 6		SW 6	
20FTWND-PM(MPH)	W 10 G18	S 9	SE 7	SW 9	
PRECIP AMOUNT	0.01	0.06	0.06	0.11	
PRECIP DURATION	1	1	4	6	
PRECIP BEGIN	6 PM	10 AM	Continuing	Continuing	
PRECIP END	8 PM	Continuing	Continuing	Continuing	
MIXING HGT(FT-AGL)		5800		6200	
TRANSPORT WND (MPH)		S 16		SW 15	
		81200		80600	
DISPERSION		5		5	
LAL	1	1	1	1	
HAINES INDEX	2	3	2	2	







#### **Routine Products**

- FWM National Fire Danger Rating System (NFDRS) Forecast
  - Coded point forecasts valid 1300 LT for the next 7 days beginning the following day
  - ☐ Issued daily around 3 pm Mar–Nov
  - Issued for six NFDRS sites in eastern NY and southern VT:
    - Albany Pine Bush, NY (300011)
    - Belleayre Mountain, NY (301111)
    - Lake Pleasant, NY (300411)
    - Stony Kill, NY (305103)
    - Saratoga Battlefield, NY (301901)
    - Woodford, VT (431303)





### Non-Routine Products: Red Flag Program

 Fire Weather Watches and Red Flag Warnings are issued when the combination of dry fuels and weather conditions support extreme fire danger and/or fire behavior

Criteria	Pre Green-Up	Green-Up
Rainfall	< 1/4 inch for at least 5 days	< 1/4 inch for at least 8 days
RH	< 30% for two or more consecutive hours	< 30% for two or more consecutive hours
Wind	sustained and/or gusts at least 25mph or greater for two or more consecutive hours	sustained and/or gusts at least 25mph for greater or two or more consecutive hours
Max Temperature	must be at least 50F for two or more consecutive hours	must be at least 50F for two or mo
Fuel	Dry fine surface fuels	Keetch Byram Drought Index





### Non-Routine Products: Red Flag Program

- Fire Weather Watch: Issued 18–96 hours in advance of the expected onset of Red Flag conditions to give advance notice
  - ☐ Issued per coordination with state fire weather contacts
- Red Flag Warning: Issued typically within 24 hours of Red Flag conditions when confidence is high in reaching criteria
  - Issued per coordination with state fire weather contacts
- Special Weather Statement: Issued when conditions support enhanced fire weather behavior, but at levels below Red Flag criteria
  - Issued per coordination with state fire weather contacts

- ☐ Issued when temperatures are below 50°F but other Red Flag criteria are expected to be met
- Also can be issued to raise elevated fire weather awareness for the fire weather community and/or general public





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### **Non-Routine Products: Spot Forecast**

Download the Product Description Document (PDD)

- Detailed forecasts of local conditions in support of wildfire suppression and natural resource management (e.g., prescribed burns)
- Typically issued with a ~20 minute turnaround time from the request
- Requests can be made via weather.gov/spot





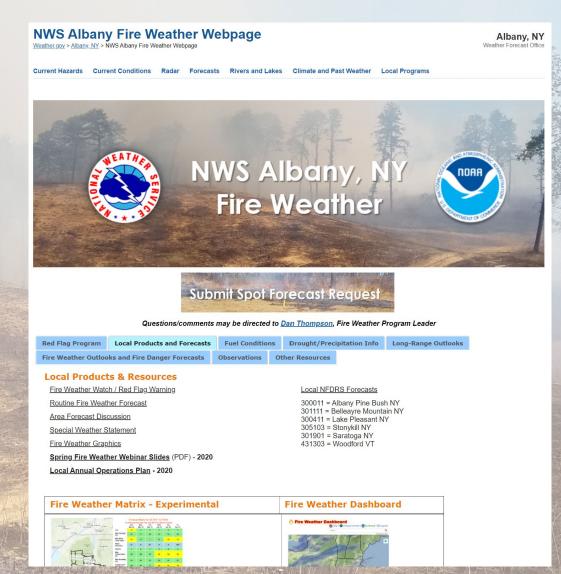


# **NWS Albany Fire Weather Webpage**



### weather.gov/aly/fire

 Redesigned last year please send feedback to dan.b.thompson@noaa.gov



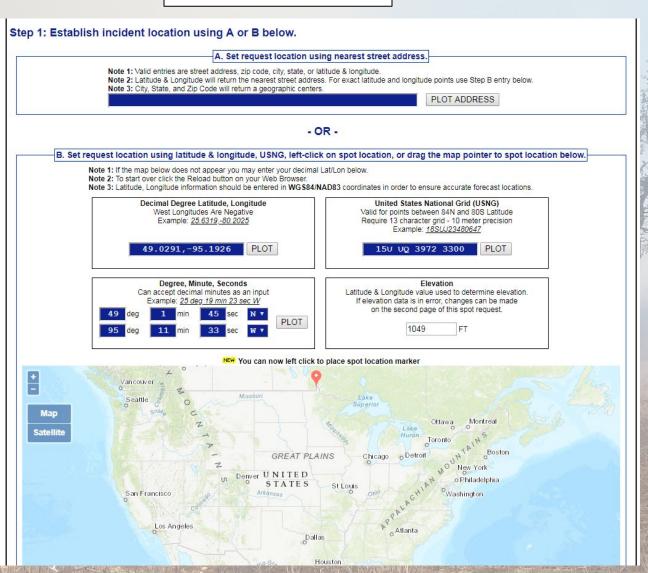






#### weather.gov/spot

 Enter nearest address, lat/lon, or click the map







#### Step 2: Select the incident type for the request.

	Set Incident Type
Fire	
	Wildfire Prescribed Fire
Haz	ardous Materials
	HAZMAT Land HAZMAT Inland Waterway
Sea	rch and Rescue
	SAR Land SAR Water
	E Samuel
	Marine
0	Other (Volcano, Earthquake, Special Event)

#### Step 3: Proceed to detailed incident request form.

After setting your location and incident type above, click on the 'Generate A Spot Request' button below to proceed to the SPOT request form.

Generate A Spot Request

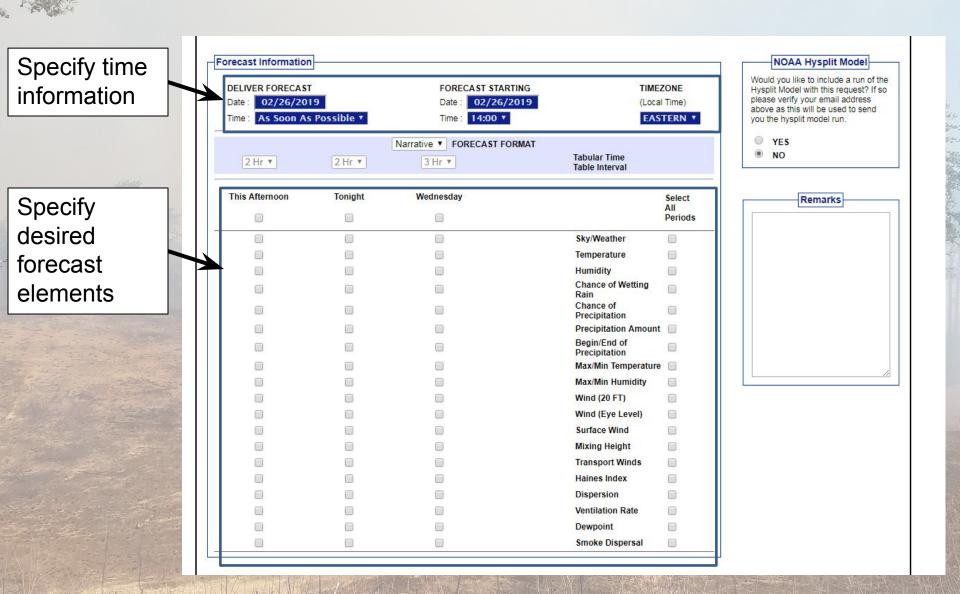




		S	pot Request Contact Infor	mation		
(*	*) PROJECT NAME:	NWS ALY TEST			ecast policy, NWS Instruction 10-401 at: aa.gov/directives/010/010.htm	
(*) R	Requesting Agency:	NWS Albany	(*) Requesting Official:	Dan Thompson		
	(*) E-mail address:	dan.b.thompson@noaa.gov	(*) Phone number:	555-555-5555	Phone Extension:	
						-
	Contact Person:		FAX number:	_		
	#12014g 4 8 8.542.242 F 1344	ation	FAX number:	_	Fire Weather Supplemental Info	ormation
	Loca preferred)	ation	FAX number:	_	Fire Weather Supplemental Info	ormation (In Acres)
WGS84 / NAD83	Loca preferred)		FAX number:	Drainage:	Size:	
(*)Latitude: 42	preferred)	ation	FAX number:	F	Size:	
WGS84 / NAD83 (*)Latitude: 42 *)Longitude: -7;	preferred)	ation	FAX number:	Drainage:	Size: Fuel Type:	
(*)Latitude: 42 *)Longitude: -7;	Local preferred) 2.6759	7.5' Quad:	FAX number:	Drainage:	Size: Fuel Type: Sheltering	



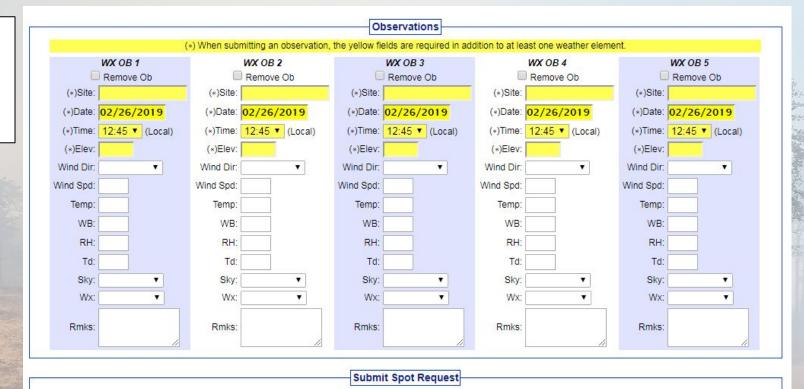








Submit weather observations (optional)



Click "Submit Request"

Clicking the button below will create a one time spot request.

This request will be processed and a forecast will be generated by the servicing forecast office at the time they receive the spot request.

At any time until the expiration of this forecast, another immediate spot request may be generated off of the original request. Additionally, the immediate spot request can be converted into a scheduled request by contacting your servicing forecast office.

Submit Request

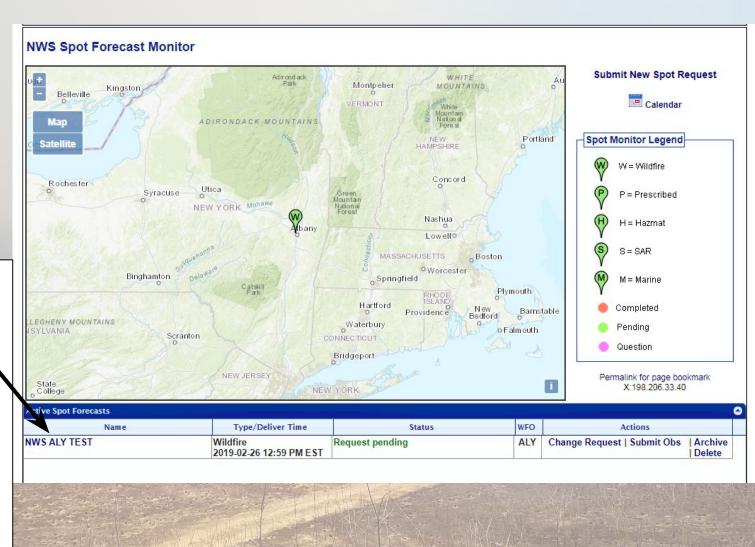
Cancel





Once you submit the request, it will send NWS an alert immediately

Click here once status is "Completed" to view the forecast. An email will also be sent to the address specified in the form when the forecast is ready.





Forecast:



#### Ash Creek Salvage pile burn

#### Prescribed Fire

Forecast Start Time:2019-02-26 11:00 AM MST Request Time: 2019-02-26 10:26 AM MST Deliver Time: 2019-02-26 10:26 AM MST

Forecast Complete At: 2019-02-26 10:41 AM MST



#### Location Legal:

Lat/Lon: 45.6356 / -106.433

Quad:

Calculated: 45.6356 / -106.433

Requested By: Northern Cheyenne Agency Contact: Phone: Fax:



Elevation: 3772 Drainage: Aspect: East Size:

Fuel Type: (unsheltered)

Observations										
Site	Date	Elev	Wind	Temp	WB	RH	Td	Sky	Wx	Rmk
Attack to the second state of the later										

No observations available

#### Submit New Observation

Requested	Parameters	Remarks

X	X	X	Sky/Weathe
X	X	X	Temperatur
v	V	V	Humiditu

X X X Chance of Wetting Rain
. . . Lightning Activity Level

X X X Wind (20 FT)

X X X Ridge Top Winds X X X Mixing Height

X X X Hixing height X X X Transport Winds X X X Haines Index

#### state and

Spot Forecast for Ash Creek Salvage pile burn...Northern Cheyenne Agency National Weather Service Billings MT 1040 AM MST Tue Feb 26 2019

Forecast is based on ignition time of 1100 MST on February 26. If conditions become unrepresentative...contact the National Weather Service.

Please contact our office if you have questions or concerns with this forecast.

#### .DTSCUSSTON...

Periods of light snow are expected this afternoon through the evening...decreasing late tonight. Temperatures today will be in the single digits above zero with lows tonight from zero to 10 below zero. Expect west to northwest winds 5 to 10 mph. Thursday will be a little warmer with just some light snow flurries. Winds will be light out of the south. BT

#### .REST OF TODAY ...

Mixing height......1800 ft AGL.

Transport winds.....Northwest around 15 mph.

Haines index......2 or very low potential for large plume

dominated fire growth.

CWR.....22 percent.

#### .TONIGHT...

Sky/weather......Cloudy with scattered snow showers.

Min temperature....3 below-8 below zero.
Max humidity......77-82 percent.

Wind (20 ft).....

Slope/valley......Northwest winds around 6 mph. Ridgetop.......Northwest around 20 mph.

Mixing height.....300 ft AGL.

Transport winds.....Northwest around 9 mph.

CWR......14 percent.





#### 88

Forecaster...Tesar
Requested by...TravisLimpy
Type of request...PRESCRIBED
.TAG 1901723.1/BYZ
.DELDT 02/26/19

.FormatterVersion 1.0.25 .EMAIL travis.limpy@bia.gov

#### Please Provide Feedback:

Send Feedback

Back to Forecast Monitor

Printer Friendly Version of Forecast Lat Copy Info to Spot Request for a New Incident

Latest Forecast

Copy Info to New Spot Request for this Incident

You can send us feedback in this box, for instance, if the observed weather conditions do not match the forecast

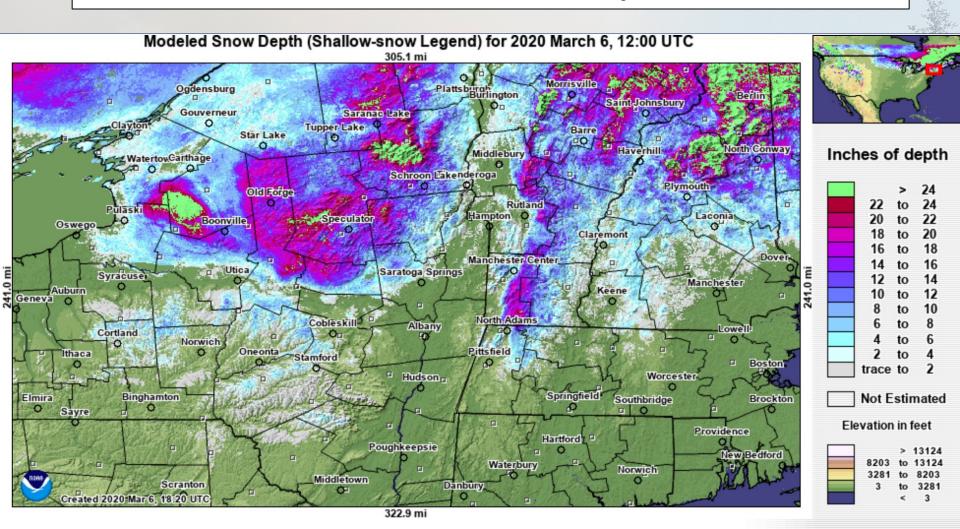






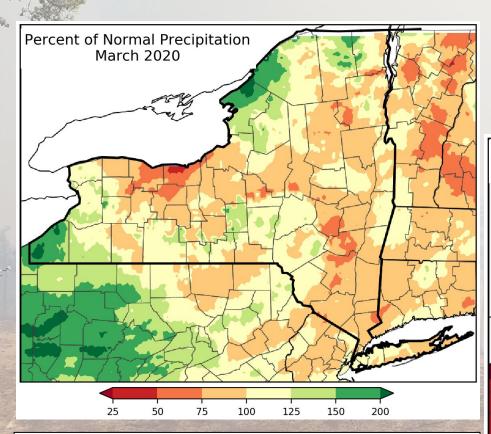


# Tame winter – Not much snow cover outside of the Adirondacks/Greens in early March







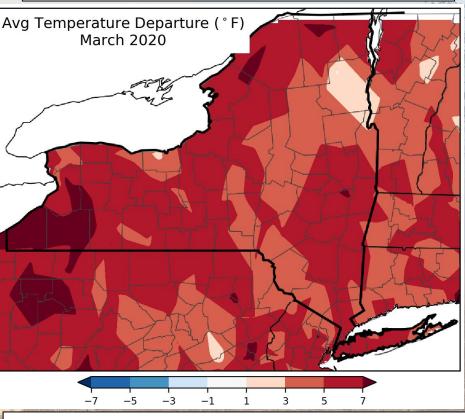


#### Feb. 28-Mar 9:

Just 0.15" precip at Albany 10/11 days no measurable precip

#### March:

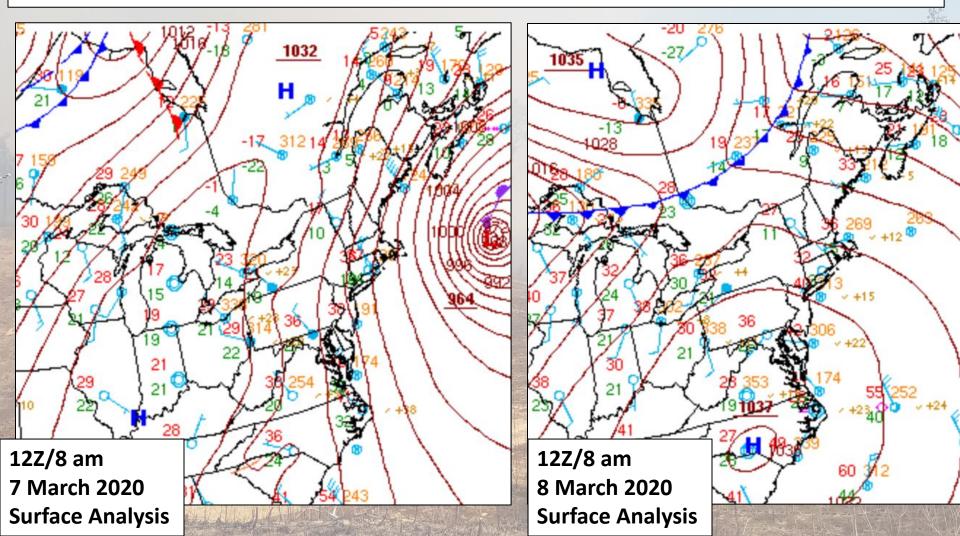
Near to below normal precip
Above normal temps



Albany 7<sup>th</sup> warmest March Poughkeepsie 8<sup>th</sup> warmest March

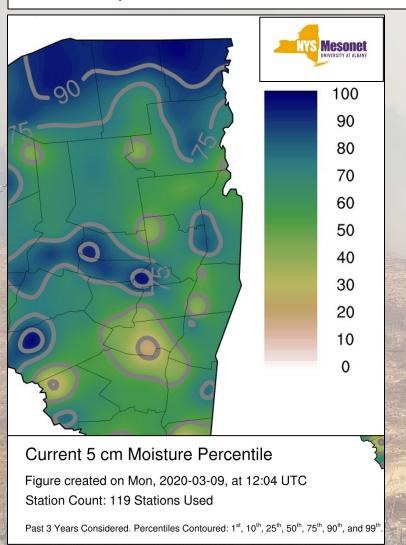


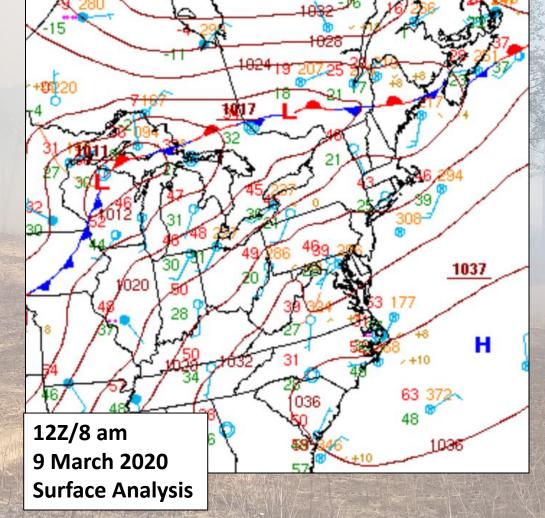






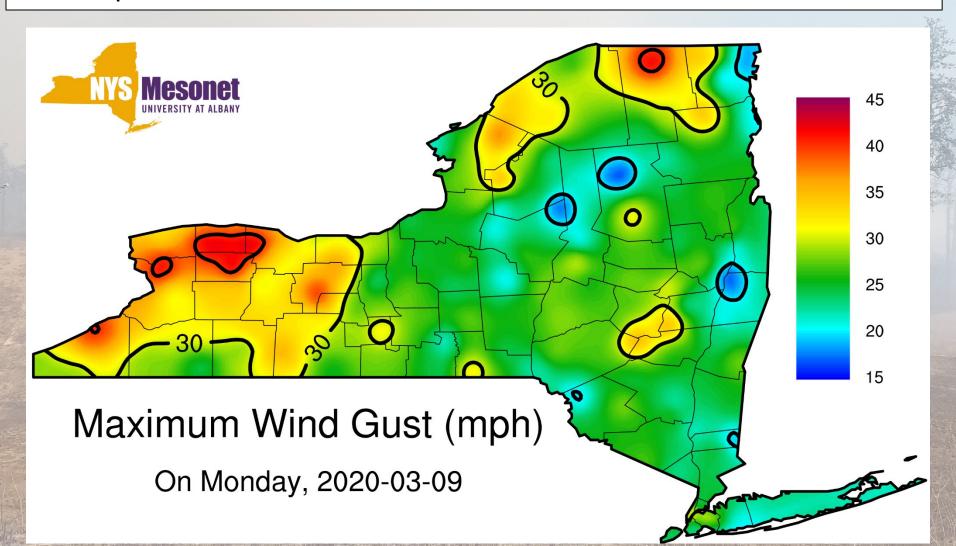






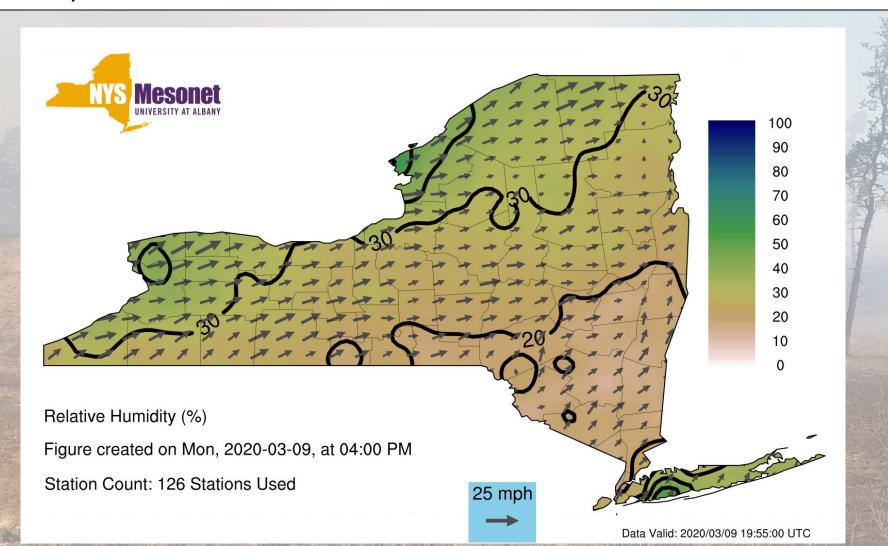






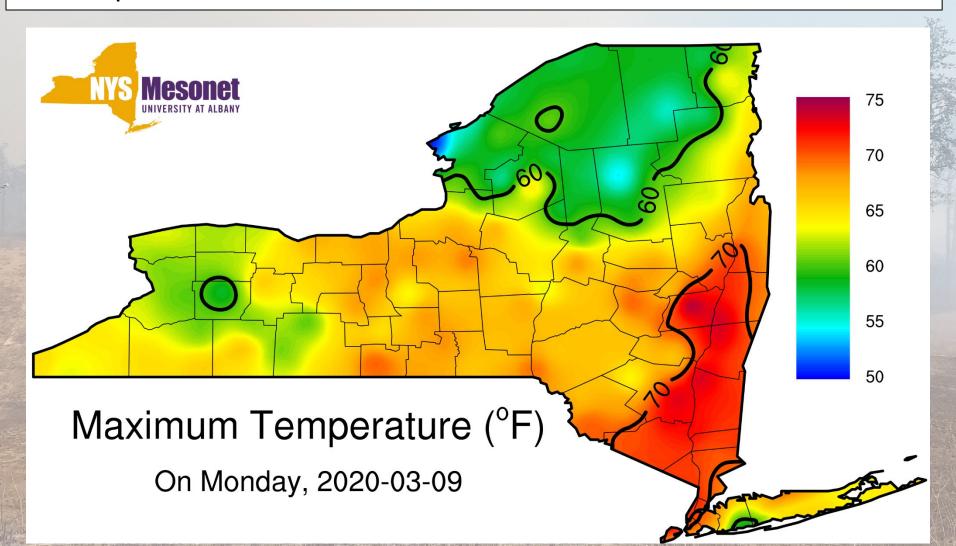






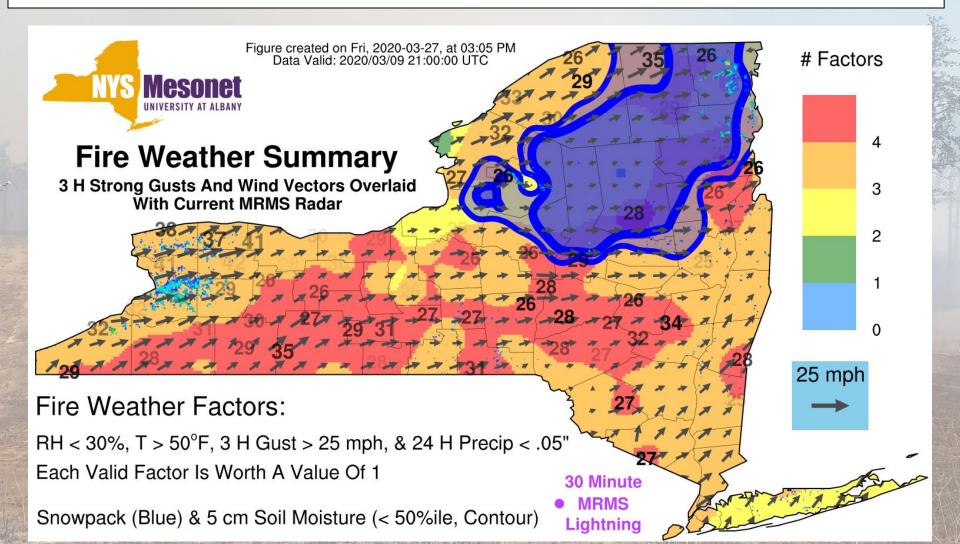






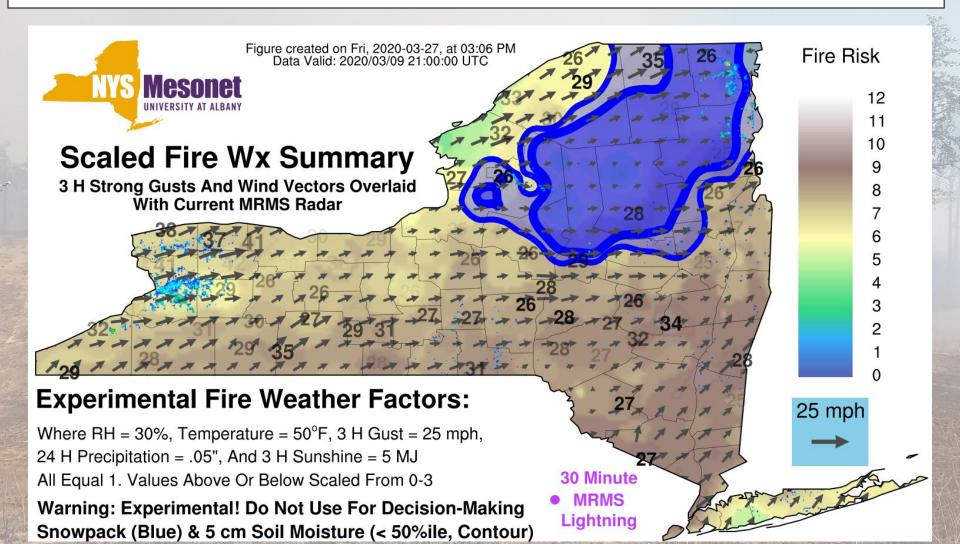














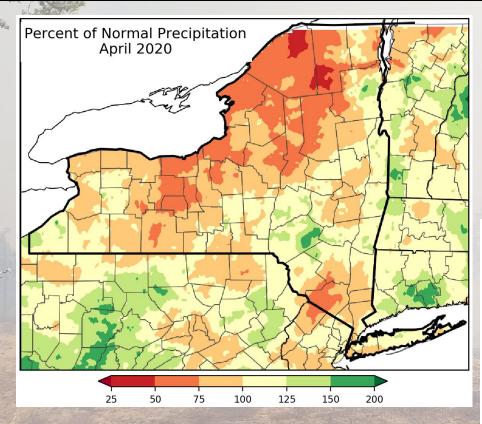


- Breakneck Ridge Fire,
   9 Mar 20, Dutchess Putnam Border
  - Possible cause: spark from nearby MetroNorth RR tracks
  - Destroyed 11 vehicles, closed Route 9D, caused delays on
     Metro North Hudson Line, closed hiking trails
  - ☐ Contained by 10 March after burning 277 acres





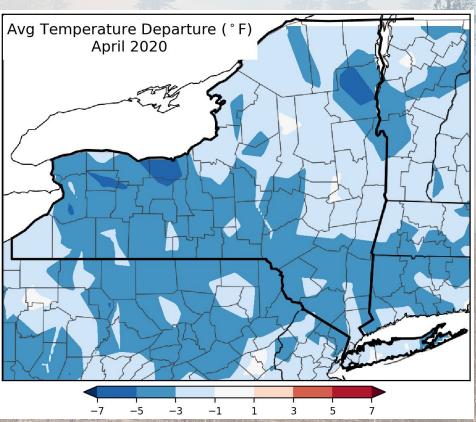




No SPS or RFW issued in April

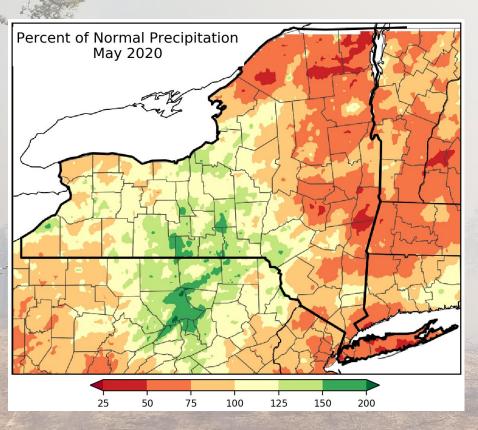
#### April:

Below normal temps
Near to below normal precip



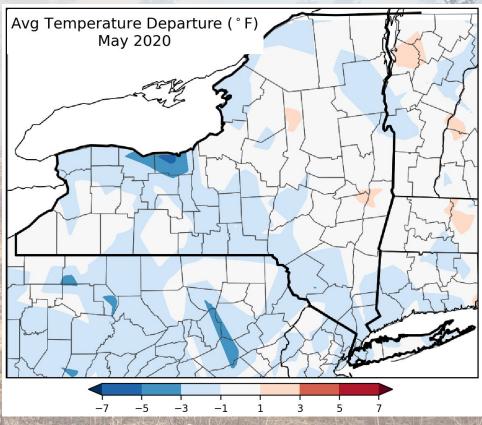






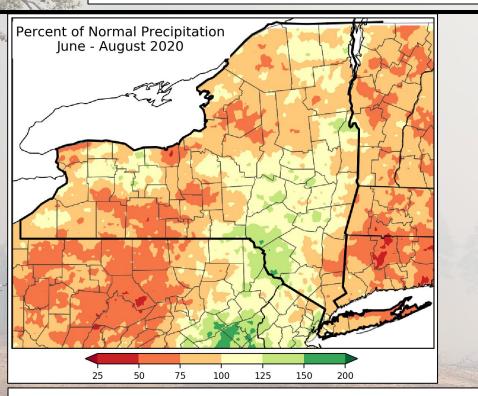
 NYSDEC responded to a couple of wildfires in the southern Adirondacks on 3 May

#### May: Near normal temps Below normal precip



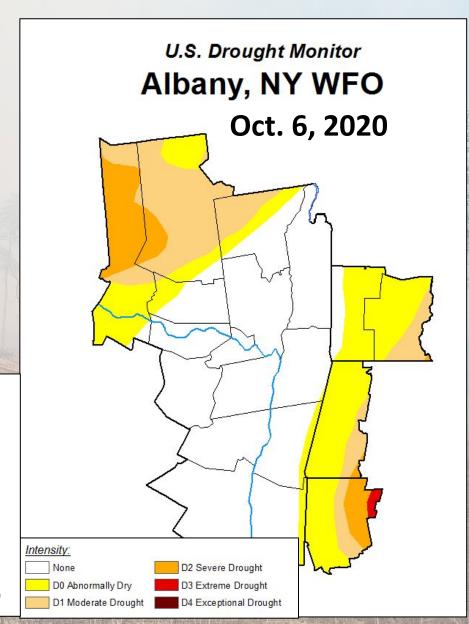






#### Summer/Fall

- Drier than normal ADKs, western New England
- Drought conditions emerged by late
   June, peaked in the fall
- Numerous small wildfires
- FWW/RFW for Berkshire County 22 Sep

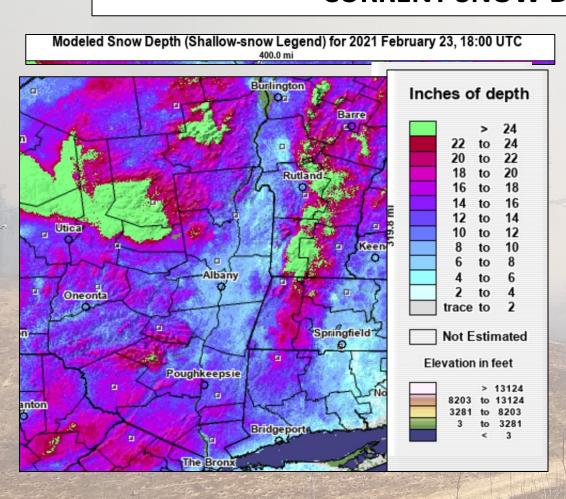




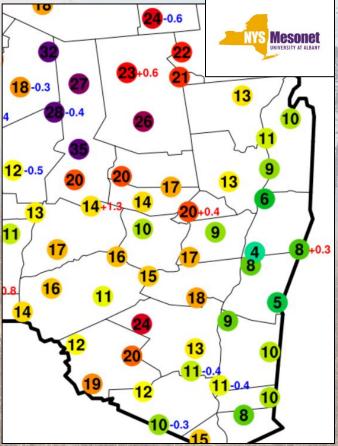




#### **CURRENT SNOW DEPTH**



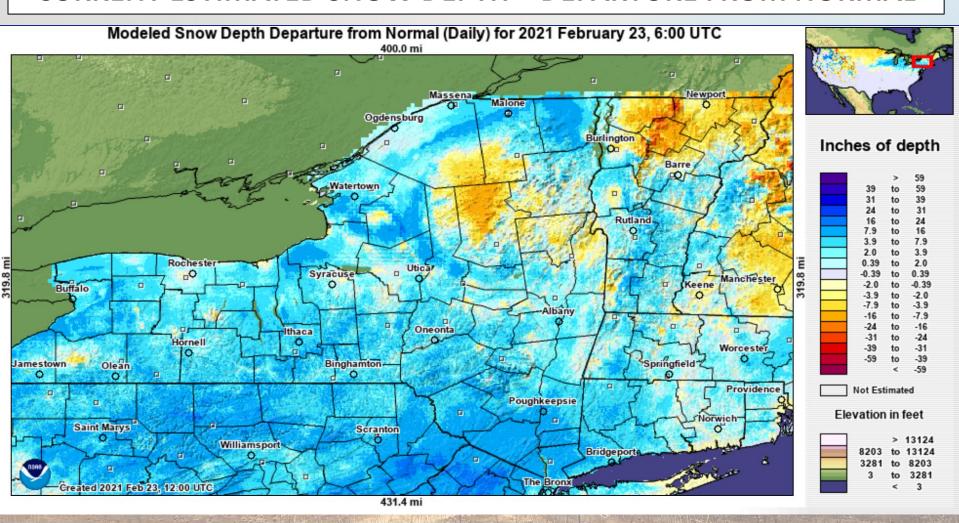
Estimated Snow Depth (in) Tuesday, 2021-02-23 Valid At 09:05 PM







#### **CURRENT ESTIMATED SNOW DEPTH – DEPARTURE FROM NORMAL**

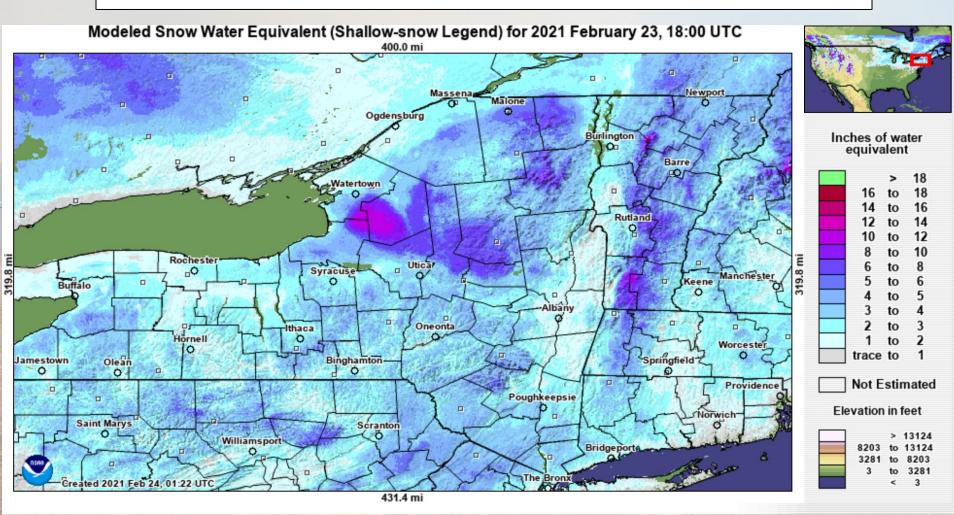


Generally above normal, except below in portions of the Adirondacks





#### **CURRENT ESTIMATED SNOW WATER EQUIVALENT**







#### 7-DAY FORECAST - Feb. 24 to Mar. 2



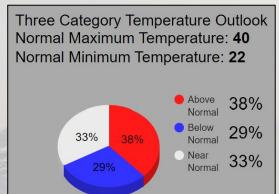


- Mider than normal, some snow melt during the day
- A couple of chance for mainly light precip (mainly rain in valleys, some snow higher terrain)

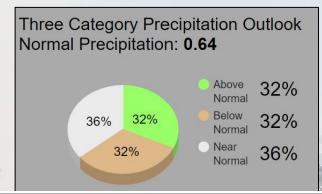




• March 3–9 likely near to above normal temps, no signal for precip









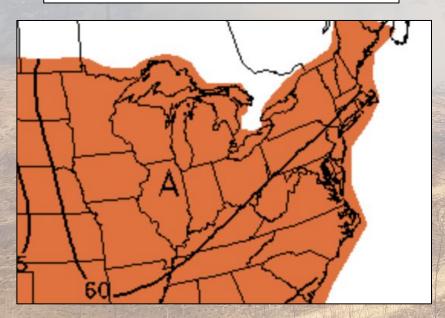


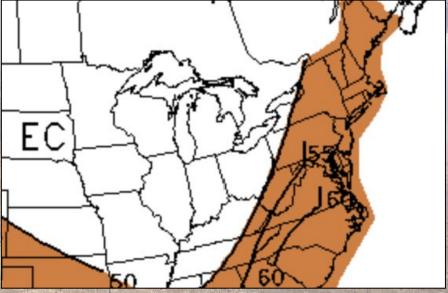


Above normal temps & below normal precip favored mid-March

Climate Prediction Center
Week 3–4 Temperature Outlook
Valid March 6–19

Climate Prediction Center Week 3-4 Precipitation Outlook Valid March 6-19

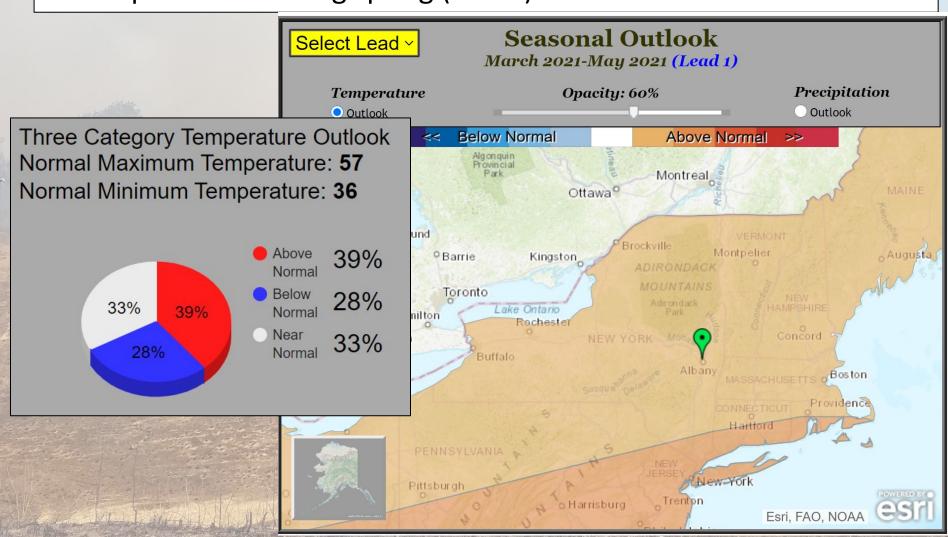








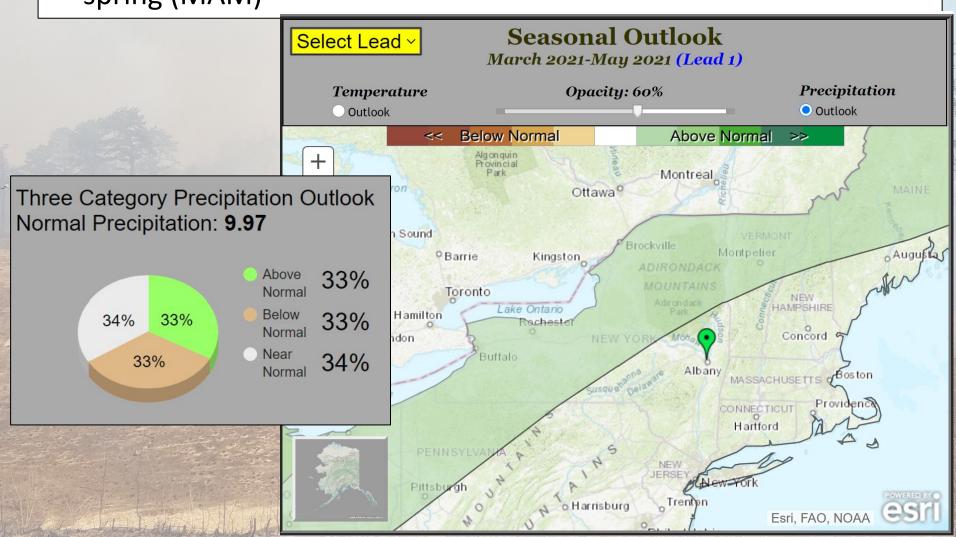
 Climate Prediction Center favoring near to above-normal temperatures during spring (MAM)







 Climate Prediction Center says no clear signal for precip during spring (MAM)







- Snow depth above normal most places as of late Feb.
- Near to above normal temps favored during spring (MAM)
- No clear signal for precip during spring (MAM)







ISSUED: 1/18/2021 9:10 AM

# **NEW:** One-Page Briefings

dan.b.thompson@noaa.gov



- Sent to the NY fire weather email list when we issue a Special Weather Statement for elevated risk of fire spread (usually AM)
- Used to raise situational awareness of fire weather conditions
- A more extensive briefing will be issued for Red Flag Warnings





# **NEW:** Fire Weather Matrix



- Linked in "Local Products and Forecast" tab of weather.gov/aly/fire
- Point-and-click planning forecast color-coded based on thresholds



		Forecast Matrix for 44.3120 -73.97232  For Planning Purposes Only, See SPOT for Official Forecast Tue Wed Thu Fri Sat Sun Feb 18 Feb 19 Feb 20 Feb 21 Feb 22 Feb 23					
	Fo	Tue	Wed	Thu	Fri	Sat	500000000000000000000000000000000000000
	LAL	1	1	1	1	1	1
	Min Humidity (%)	75	64	60	62	66	61
2	Max Wind Gust (mph)	41	32	16	23	25	16
Ĺ	Wind Direction *	S	w	w	w	w	sw
	Haines	3	3	5	4	3	2
	Max Temperature (F)	36	21	9	22	32	35
V.	Max Humidity (%)	85	88	82	100	84	78
	Cloud Cover @1500 (%)	100	62	53	46	53	60
	Probability of Precip (%)	100	30	8	5	5	13

	Neutral - Values that Neutralize or Suppress Fire Conditions	Caution - Values that Support Elevated Fire Conditions	Danger - Values that Promote Extreme Fire Conditions			
LAL Criteria:	4, 5	2, 3	6			
Min Humidity Criteria:	>= 30 %	21 to 29 %	<= 20 %			
Max Wind Gust Criteria:	<= 10 mph	11 to 19 mph	>= 20 mph			
Wind Direction Criteria:	Criticality of wind direction highly dependent on burn operations and/or structures threatened. Direction matches timing of max gust.					
Haines Criteria:	<= 4	5	6			
Max Temp. Criteria:	Temperature thresholds available between June 1 and September 20.					
Max Humidity Criteria:	>= 55 %	35 to 54 %	<= 34 %			
Cloud Cover Criteria:	>= 40 %	< 39 %				
Probability of Precip Criteria:	>= 40 %	< 39 %				

A Critical Weather Day is when 4 or more parameters are Red.



25

Sun Feb 23

Mon Feb 24

Tue Feb 25

Wed Feb 26

# **NEW:** Fire Wx Dashboard



- Linked in "Local Products and Forecast" tab of weather.gov/aly/fire
- Point-and-click forecast hourly/daily
- Mobile-friendly



Thu Feb 27

Fri Feb 28

Sat Feb 29

Sun Mar 01

Mon Mar 02



PHARAOH MOUNTAIN

winds around 15 mph.

Detailed Forecast Data:

TIME (EST)

WIND DIR

SNOW AMT (IN)

# NEW:

#### **Summit Forecasts**



#### weather.gov/aly/mountain

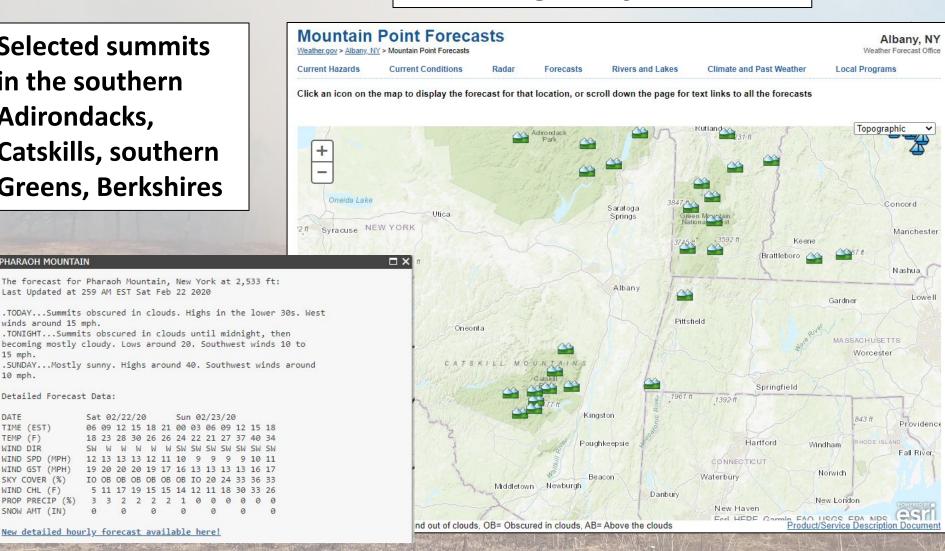
**Selected summits** in the southern Adirondacks, Catskills, southern **Greens, Berkshires** 

Last Updated at 259 AM EST Sat Feb 22 2020

12 13 13 13 12 11 10 19 20 20 20 19 17 16 13 13 13

New detailed hourly forecast available here!

Sun 02/23/20

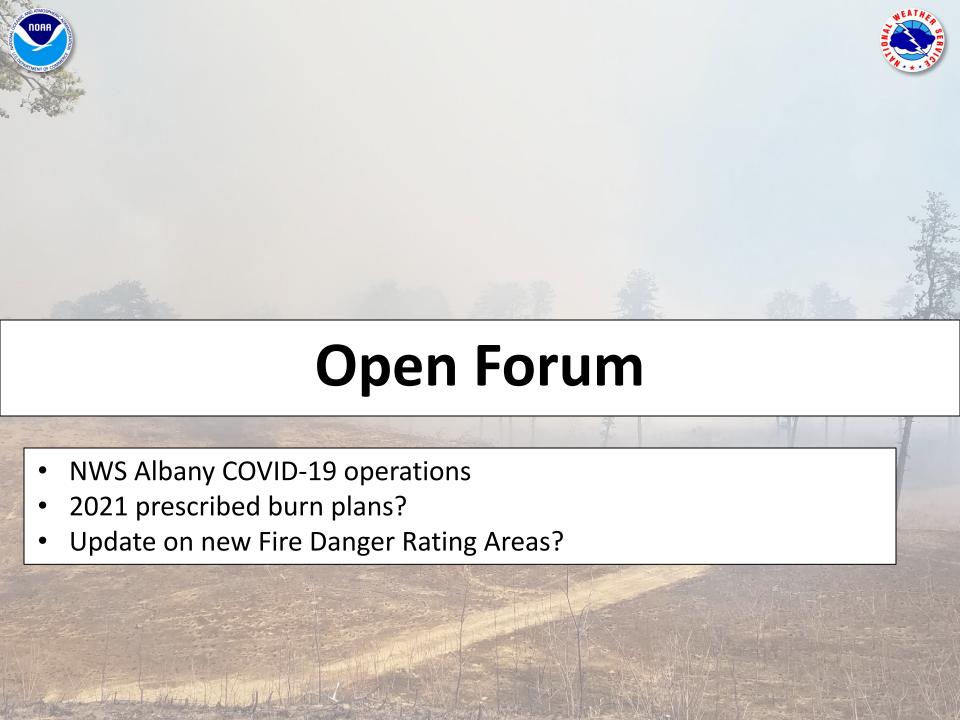






# 2021 NY Burn Ban/Start of NWS Albany Fire Weather Season

Thursday, March 11<sup>th</sup> (or earlier if conditions warrant)







# Thank You!

#### **Dan Thompson**

NWS Albany
Meteorologist/Fire Weather Program Leader
dan.b.thompson@noaa.gov

#### Steve DiRienzo

NWS Albany
Warning Coordination Meteorologist
stephen.dirienzo@noaa.gov